

# Postgraduate Certificate Anatomical 3D Modeling





## Postgraduate Certificate Anatomical 3D Modeling

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Technological University
- » Schedule: at your own pace
- » Exams: online

Website: [www.techitute.com/us/videogames-design/postgraduate-certificate/anatomical-3d-modeling](http://www.techitute.com/us/videogames-design/postgraduate-certificate/anatomical-3d-modeling)

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# 01

# Introduction

Creating a 3D model from scratch requires advanced technological skills in the main design tools on the market, but what many professionals overlook is the actual anatomical knowledge of the figures to be represented. This lack of knowledge leads to unrealistic figures that stand out negatively in the video game, tarnishing the work of the creative. This TECH program comes to solve this issue of prime necessity, instructing its students in everything related to anatomical modeling so that their figures are as realistic as possible. By acquiring this set of knowledge, the students will stand out from their professional peers, thus gaining access to better positions and salaries.





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*3D anatomy will lead you to be responsible for bigger and better projects, being able to bring that vision of scientific realism to your three dimensional creations”*

To make quality designs, the professional must have a series of indispensable skills with which to surpass the average and offer models that meet all standards, especially when it comes to models that must be realistic and plausible.

Anatomy plays an important role in the credibility of human 3D models, as following real anatomical principles makes a much more effective impression on the viewer, giving them a sense of genuine authenticity that makes them empathize with the characters and become much more immersed in the story being told.

For this reason, the Postgraduate Certificate in Anatomical 3D Modeling emphasizes the basic and complex issues of the human body, starting from the general vision of the skeleton and musculature and then portraying, part by part, all the facets that compose it. Thus, the student gains a comprehensive understanding of the entire process of creating a realistic 3D human figure.

A unique teaching in the educational market, as it combines the most valuable theory in 3D design with an innovative online methodology in which the student has the freedom to choose when, where and how to assimilate all the didactic material. With a presence in many countries around the world, TECH is the best travel companion to embark on a journey towards the greatest professional success in the field of 3D design.

This **Postgraduate Certificate in Anatomical 3D Modeling** contains the most complete and up to date program on the market. Its most notable features are:

- ◆ The development of case studies presented by experts in 3D modeling
- ◆ The graphic, schematic, and practical contents with which they are created, provide practical information on the disciplines that are essential for professional practice
- ◆ Practical exercises where self assessment can be used to improve learning
- ◆ Its special emphasis on innovative methodologies
- ◆ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ◆ Content that is accessible from any fixed or portable device with an Internet connection



*Learn the secrets behind the most realistic and believable 3D human characters"*

“

*Now is the ideal time to stand out in an ever growing industry. Demonstrate that you have the necessary skills by incorporating Anatomical 3D Modeling into your curriculum”*

*Imagine yourself at the helm of the 3D video game design project you've always dreamed of. Now stop imagining it and make it possible by enrolling in this Postgraduate Certificate today.*

*You will learn to represent characters such as Lara Croft, Kratos or Link himself in a reliable way.*

The program's teaching staff includes professionals from the sector who contribute their work experience to this training program, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive training programmed to train in real situations.

This program is designed around Problem Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.



# 02

## Objectives

This program aims to instruct students in the anatomical principles necessary to represent 3D figures with realism and scientific accuracy. Thanks to this, the quality of the student's work will increase, as they will incorporate into their daily work methodology the necessary knowledge to accurately recreate any part of the human body. This is indispensable knowledge in any high level design studio, so the students are also preparing themselves to make an important leap in their career path.







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*This is the program you were looking for to finish giving a quality twist to all your human 3D models”*



## General Objectives

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- ◆ Expand knowledge of human and animal anatomy in order to develop hyper-realistic creatures
- ◆ Master the retopology, UVS and texturing to perfect the models created
- ◆ Create an optimal and dynamic workflow to work more efficiently with 3D modelling
- ◆ Have the skills and knowledge most in demand in the 3D industry to be able to apply for the best jobs





## Specific Objectives

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- ◆ Investigate both male and female human anatomy
- ◆ Develop the highly detailed human body
- ◆ Hyper-realistic face sculpting

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*Your career goal will be a lot closer after you start studying anatomy applied to 3D video game modelling”*

03

# Course Management

The teaching material provided by the TECH teaching team is of the highest quality. This is achieved thanks to the effort made in bringing together a team of professionals versed in the art of 3D modeling, who also bring an innovative vision to their work arising from their own experience in the sector. The student has the direct advice of a teaching staff that knows their needs, the requirements of the video game industry and the knowledge that makes the difference when applying for better positions and projects.





“

*Only the best experts work with TECH. You will have the help of committed teachers who will help you reach your full potential by designing high quality models”*

## International Guest Director

Joshua Singh is a leading professional with over 20 years of experience in the video game industry, internationally recognized for his skills in art direction and visual development. With solid training in software such as Unreal, Unity, Maya, ZBrush, Substance Painter and Adobe Photoshop, he has made a significant mark in the field of game design. In addition, his experience spans visual development in both 2D and 3D, and is distinguished by his ability to collaboratively and thoughtfully solve problems in production environments.

In addition, as Art Director at Marvel Entertainment, he has collaborated with and guided elite teams of artists, ensuring that the artwork meets the required quality standards. He has also served as Lead Character Artist at Proletariat Inc. where he has created a safe environment for his team and has been responsible for all character assets in video games.

With an outstanding track record, including leadership roles at companies such as Wildlife Studios and Wavedash Games, Joshua Singh has been an advocate for artistic development and a mentor to many in the industry. Not to mention his time at large and well-known companies, such as Blizzard Entertainment and Riot Games, where he has worked as a Senior Character Artist. And, among his most relevant projects, stands out for his participation in hugely successful video games, including Marvel's Spider-Man 2, League of Legends and Overwatch.

Thus, his ability to unify the vision of Product, Engineering and Art has been fundamental to the success of numerous projects. Beyond his work in the industry, he has shared his experience as an instructor at the prestigious Gnomon School of VFX and has been a presenter at renowned events such as the Tribeca Games Festival and the ZBrush Summit.



## D. Singh, Joshua

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- Art Director at Marvel Entertainment, California, USA
- Lead Character Artist at Proletariat Inc.
- Art Director at Wildlife Studios
- Art Director at Wavedash Games
- Senior Character Artist at Riot Games
- Senior Character Artist at Blizzard Entertainment
- Artist at Iron Lore Entertainment
- 3D Artist at Sensory Sweep Studios
- Senior Artist at Wahoo Studios/Ninja Bee
- General Studies from Dixie State University
- Degree in Graphic Design from Eagle Gate Technical College

“

*Thanks to TECH, you will be able to learn with the best professionals in the world”*

## Management



### Ms. Gómez Sanz, Carla

- 3D Generalist at Blue Pixel 3D
- Concept Artist, 3D Modeler, Shading in Timeless Games Inc
- Collaboration with multinational consulting firm for the design of vignettes and animation for commercial proposals
- Advanced Technician in 3D Animation, video games and interactive environments at CEV School of Communication, Image and Sound
- Master's Degree and Bachelor's Degree in 3D Art, Animation and Visual Effects for video games and cinema at CEV School of Communication, Image and Sound

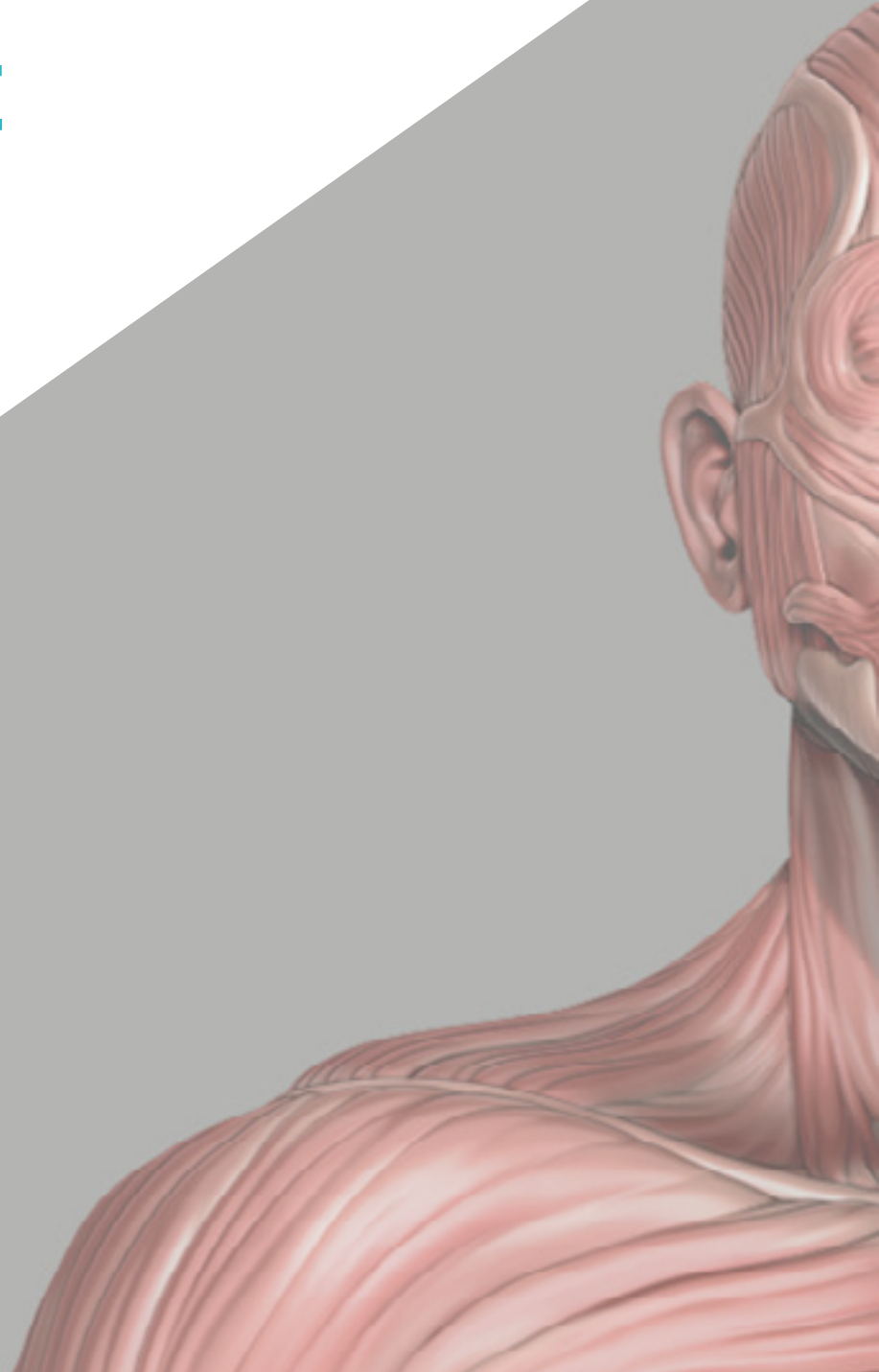




# 04

## Structure and Content

The structure followed in this Postgraduate Certificate is based on TECH's most innovative educational methodology. Based on Relearning, the student learns the most decisive concepts of the qualification in a reiterative, orderly and directed manner. In addition, the teaching staff has incorporated numerous practical cases of real 3D modeling in which all the anatomical knowledge taught is applied, so that the student has a contextual and pragmatic view of the didactic material.





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*You will master the abc of anatomy to become a 3D designer admired for the great realism of its human models"*

## Module 1. Anatomy

- 1.1. General Skeletal Masses and Proportions
  - 1.1.1. Bones
  - 1.1.2. The Human Face
  - 1.1.3. Anatomical Canons
- 1.2. Anatomical Differences between Genders and Sizes
  - 1.2.1. Shapes Applied to Characters
  - 1.2.2. Curves and Straight Lines
  - 1.2.3. Behavior, Bones, Muscles and Skin
- 1.3. Head
  - 1.3.1. The Skull
  - 1.3.2. Muscles of the Head
  - 1.3.3. Layers: Skin, Bone and Muscle Facial Expressions
- 1.4. The Torso
  - 1.4.1. Torso Musculature
  - 1.4.2. Central Axis of the Body
  - 1.4.3. Different Torsos
- 1.5. The Arms
  - 1.5.1. Joints: Shoulder, Elbow and Wrist
  - 1.5.2. Arm Muscle Behavior
  - 1.5.3. Detail of the Skin
- 1.6. Hand Sculpting
  - 1.6.1. Hand Bones
  - 1.6.2. Hand Muscles and Tendons
  - 1.6.3. Hand Skin and Wrinkles





- 1.7. Leg Sculpting
  - 1.7.1. Joints: Hip, Knee and Ankle
  - 1.7.2. Muscles of the Leg
  - 1.7.3. Detail of the Skin
- 1.8. The Feet
  - 1.8.1. Bone Construction for the Foot
  - 1.8.2. Foot Muscles and Tendons
  - 1.8.3. Foot Skin and Wrinkles
- 1.9. Whole Human Figure Composition
  - 1.9.1. Complete Creation of a Human Base
  - 1.9.2. Joint and Muscle Attachment
  - 1.9.3. Skin Composition, Pores and Wrinkles
- 1.10. Complete Human Model
  - 1.10.1. Model Polishing
  - 1.10.2. Hyper Skin Detail
  - 1.10.3. Composition



*You will become the spearhead of the 3D modeling industry in video games with anatomical knowledge that is essential if you want to stand out with quality and realism”*

# 05

# Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.





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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## Case Study to contextualize all content

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

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*At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world”*



*You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.*





*The student will learn to solve complex situations in real business environments through collaborative activities and real cases.*

### A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.

“*Our program prepares you to face new challenges in uncertain environments and achieve success in your career*”

The case method has been the most widely used learning system among the world's leading business schools for as long as they have existed. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question that you are presented with in the case method, an action-oriented learning method. Over the course of 4 years, you will be presented with multiple practical case studies. You will have to combine all your knowledge, and research, argue, and defend your ideas and decisions.

## Relearning Methodology

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

*In 2019, we obtained the best learning results of all online universities in the world.*

At TECH you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only one in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.



In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

This methodology has trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

*Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.*

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.



This program offers the best educational material, prepared with professionals in mind:



### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



### Practising Skills and Abilities

They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization we live in.



### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





### Case Studies

Students will complete a selection of the best case studies chosen specifically for this program. Cases that are presented, analyzed, and supervised by the best specialists in the world.



### Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



06

# Certificate

The Postgraduate Certificate in Anatomical 3D Modeling guarantees students, in addition to the most rigorous and up to date education, access to a Postgraduate Certificate issued by TECH Technological University.



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*Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"*

This **Postgraduate Certificate in Anatomical 3D Modeling** contains the most complete and up to date program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Certificate** issued by **TECH Technological University** via tracked delivery\*.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the **Postgraduate Certificate**, and meets the requirements commonly demanded by labor exchanges, competitive examinations and professional career evaluation committees.

**Title: Postgraduate Certificate in Anatomical 3D Modeling**

**Official N° of hours: 150 h.**



\*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.



future

health confidence people

education information tutors

guarantee accreditation teaching

institutions technology learning

community commitment

personalized service innovation

knowledge present quality

development languages

virtual classroom

**tech** technological  
university

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